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10/583,502	02/27/2007	Caroline Heiligenmann	2003P01931WOUS	3692

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EXAMINER

KO, STEPHEN K

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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01/21/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NBN-IntelProp@bshg.com

Office Action Summary	Application No. 10/583,502	Applicant(s) HEILIGENMANN ET AL.	
	Examiner STEPHEN KO	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) 31-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-30 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/06/2008;06/20/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 21-30 and 40) in the reply filed on 09/29/2009 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application can be made without serious burden.

Applicants' attention is drawn to the fact that the search for method claims requires the identification of processing steps, while the search for apparatus claims requires the identification of structural elements. The method and apparatus claims are differently classified, which introduces additional search burden. Applicants' arguments that the search of one invention must necessarily result in a search for the other one has been considered, but is not found persuasive insofar as the searches are not co-extensive and additional search would of necessity be required for the combination of inventions. Claims 31-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the water jet diffuser (Claim 27) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase “Not Applicable” should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.

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- (1) Field of the Invention.
- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities: The disclosure does not have the layout as cited above.

Appropriate correction is required.

Claim Objections

4. Claims 23, 24 and 29 are objected to because of the following informalities: a) "the mist can be produced from rising liquid or raw water by..." in L.2 of claim 23 is apparently should be written as "the mist can be produced from the rinsing liquor or the raw water by..." b) "wherein gas having an oxidizing..." in L.1 of claim 24 is apparently should be written as "wherein the gas having an oxidizing..." c) "to prevent growth of bacteria in the rinsing liquor reservoir and/or heat exchanger" in L.3-4 of claim 29 is apparently should be written as "to prevent growth of bacteria in the rinsing liquor and/or the heat exchanger". Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 21 recites limitation "a dishwasher comprising...at least one wash program comprising partial program steps..." (Claim 21, L.1-3), which is interpreted as computer codes/signal, which are non-statutory subject matter.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 21-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claims 21 and 23, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

9. Claim 21 recites the limitation "the items" in L.2 of claim 21. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 21 recites the limitation "the raw water" in L.6 of claim 21. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "preferably at the bottom of the washing container" (L.3-4 of claim 26). The use of the phrase "preferably" to link a broader range of values and/or meanings with a narrower range of values and/or meanings render the claim to be indefinite. It is not clear what controls the actual metes and bounds of the claimed

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subject matter. If a preferred embodiment is stated in a single claim, examples and preferences lead to confusion over the intended scope of the claim, because the metes and bounds of the claim are not clearly set forth. See **MPEP 2173.05(c)**.

11. Claim 28 recites the limitation "the water jet pump" in L.1 of claim 28. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 28 recites the limitation "the raw water pipe" in L.2 of claim 28. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 28 recites the limitation "the circulating pipe" in L.2 of claim 28. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "preferably only a portion of the raw water or the rinsing liquor is passed to a branch" (L.3-4 of claim 28). The use of the phrase "preferably" to link a broader range of values and/or meanings with a narrower range of values and/or meanings render the claim to be indefinite. It is not clear what controls the actual metes and bounds of the claimed subject matter. If a preferred embodiment is stated in a single claim, examples and preferences lead to confusion over the intended scope of the claim, because the metes and bounds of the claim are not clearly set forth. See **MPEP 2173.05(c)**.

14. Claim 29 recites the limitation "the rinsing liquor reservoir" in L.2-3 of claim 29. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 21 recites the limitation "the heat exchanger" in L.3 of claim 29. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 21-24, 27-28, 30 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-014844.

JP 10-014844 teaches a device for washing and disinfecting dish and other tableware (title) comprising a washing container (Fig.1, #2), devices for applying rinsing liquor to the items to be washed in the washing container (Fig.1, #7); a wash program?? comprising partial program steps (abstract, washing mode and disinfecting mode); the washing container being operable to receive therein a gas having an oxidizing effect that has to the rinsing liquor or a raw water and/or otherwise added into the interior of the washing container for use for a partial program step having a cleaning effect, so that the gas can at least used for cleaning and disinfection.

For claim 22, note that the gas having an oxidizing effect can be applied to the items to be washed in cooperation with mist in the interior of the washing container (abstract).

For claim 23, note that the mist can be produced from rinsing liquid or raw water by a nebulising device (Fig.1, #63, abstract).

For claim 24, note that the gas having an oxidizing effect is already added to the rinsing liquor or the raw water which is supplied to the nebulising device (Fig.1, #63, abstract).

For claim 27, note that JP 10-014844 teaches a water jet diffuser (Fig.3). Since all the structure are found in the prior art, it is fully capable of performing the functions as recited in claim 27.

For claim 28, note that a water jet pump (Fig.1, #6) is disposed in a raw water pipe (Fig.1, unlabeled, the pipe connecting valve #52 and mixer #51 through valve #53, water jet pump #6 and valve #55) or in a circulating pipe (Fig.1, unlabeled, the pipe connecting sump #9 and spray arm through valve #53, water jet pump #6 and valve #55) for acting upon the devices for applying rinsing liquor to the items to be washed. Note that the device is fully capable of passing a portion of the raw water or the rinsing liquor to a branch (Fig.1).

For claim 30, note that the gas having an oxidizing effect is ozone (abstract), which is produced in an ozone generator (Fig.1, #40).

For claim 40, JP 10-014844 teaches a device for washing and disinfecting dish and other tableware (title) comprising a washing container (Fig.1, #2) and devices, which is fully capable of applying rinsing liquor to the items to be washed in the washing container (Fig.1, #7), wherein the washing container being operable to receive therein ozone-enriched mist at least for cleaning items to be washed.

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Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 21-23, 25, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono (US 5,172,572) in view of JP 2003-144372.

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Ono teaches a dishwasher comprising a washing container (Fig.1, #18), devices which is fully capable of applying rinsing liquor to the items to be washed in the washing container (Fig.1, unlabeled, the orifice of an atomizer #9); an nebulising device which is fully capable of producing mist (Fig.1, #9), and at least wash program comprising partial program steps (Fig.4).

Ono remains silent about the washing container being operable to receive therein a gas having an oxidizing effect that has been added to the rinsing liquor or the raw water and/or otherwise added into the interior of the washing container for use for a partial program step having a cleaning effect, so that the gas can at least be used for cleaning and disinfection.

JP 2003-144372 teaches a dishwasher comprising a washing container (Fig.10, #2) being operable to receive therein a gas having oxidizing effect (abstract) added into the interior of the washing container for use for a partial program step having cleaning effect, so that the gas can at least be used for cleaning and disinfection (Fig.10, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of Ono by having the washing container being operable to receive therein a gas having an oxidizing effect added into the interior of the washing container for use for a partial program step having cleaning effect, so that the gas can at least be used for cleaning and disinfection as motivated by JP 2003-144372 to sterilize and deodorize dishes (JP 2003-144372, abstract), thus enhance cleaning efficiency of the dishes.

For claim 22, note that the dishwasher of combined teaching of Ono and JP 2003-144372 is fully capable of applying the gas having an oxidizing effect to the items to be washed in cooperation with mist in the interior of the washing container.

For claim 23, note that the dishwasher of combined teaching of Ono and JP 2003-144372 is fully capable of producing the mist from rinsing liquid or raw water by the nebulising device (Ono, Fig.1, #9).

For claim 25, note that the dishwasher of combined teaching of Ono and JP 2003-144372 is fully capable of performing the step of no gas having an oxidizing effect being already added to the rinsing liquor or the raw water which is supplied to the nebulising device. Note that the gas having an oxidizing effect is added directly to the interior of the washing container (JP 2003-144372, Fig.10) in the dishwasher of combined teaching of Ono and JP 2003-144372.

For claim 28, note that Ono teaches a water jet pump (Ono, Fig.1, #8) is disposed in a circulation pipe (Ono, Fig.1, #7) for acting upon the devices, which is fully capable of applying rinsing liquor to the items to be washed.

For claim 30, note that the dishwasher of combined teaching of Ono and JP 2003-144372 teach the gas having an oxidizing effect is ozone, which is produced in an ozone generator (JP 2003-144372, abstract).

22. Claims 21-24 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono (US 5,172,572) in view of JP 11-137882.

Ono teaches a dishwasher comprising a washing container (Fig.1, #18), devices which is fully capable of applying rinsing liquor to the items to be washed in the washing

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container (Fig.1, unlabeled, the orifice of an atomizer #9); an nebulising device which is fully capable of producing mist (Fig.1, #9), and at least wash program comprising partial program steps (Fig.4).

Ono remains silent about the washing container being operable to receive therein a gas having an oxidizing effect that has been added to the rinsing liquor or the raw water and/or otherwise added into the interior of the washing container for use for a partial program step having a cleaning effect, so that the gas can at least be used for cleaning and disinfection.

JP 11-137882 teaches a dishwasher comprising a washing container (Fig.7, #51) being operable to receive therein a gas having an oxidizing effect added into the interior of the washing container.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of Ono by having the washing container being operable to receive therein a gas having an oxidizing effect added into the interior of the washing container as motivated by JP 11-137882 to reduce COD (Chemical Oxygen Demand) and BOD (Biochemical Oxygen Demand) in drain water, thus provide a more environmental friendly dishwasher. Since all the structures are found in the combined prior art, it is fully capable of performing the functions as recited in claims 21-22 and 24.

For claim 23, note that the dishwasher of combined teaching of Ono and JP 11-137882 is fully capable of producing the mist from rinsing liquid or raw water by the nebulising device (Ono, Fig.1, #9)

For claim 28, note that Ono teaches a water jet pump (Ono, Fig.1, #8) is disposed in a circulation pipe (Ono, Fig.1, #7) for acting upon the devices, which is fully capable of applying rinsing liquor to the items to be washed.

For claim 29, note that the dishwasher of combined teaching of Ono and JP 11-137882 is fully capable of adding the gas having an oxidizing effect to the rinsing liquor or the raw water in a rinsing liquor reservoir (Fig.7 of JP 11-137882, unlabeled, the sump of the dishwasher). The gas having an oxidizing effect is fully capable of preventing growth of bacteria in the rinsing liquor reservoir.

For claim 30, note that the dishwasher of combined teaching of Ono and JP 11-137882 teach the gas having an oxidizing effect is ozone, which is produced in an ozone generator (JP 11-137882, abstract and Fig.7, #76).

23. Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ono (US 5,172,572) in view of JP 11-137882 in further view of Veeder et al (US 5,863,031).

Ono and JP 11-137882 teach a dishwasher cited above.

Ono and JP 11-137882 remain silent about the gas having an oxidizing effect is added to the rinsing liquor for solution and reaction, using a porous membrane in the rinsing liquor.

However, Veeder et al teach a porous membrane (Fig.1, #40) in a volume of liquid for adding a gas having an oxidizing effect into the liquid (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of Ono and JP 11-137882 by adding a porous membrane such that the gas having an oxidizing effect is

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added to the rinsing liquor for solution and reaction through the porous membrane in the rinsing liquor as motivated by Veeder et al to produce a finer gas bubbles, so that the surface area of gas exposed to the liquid can be optimized (Veeder et al, col.1, L.31-34).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN KO whose telephone number is (571)270-3726. The examiner can normally be reached on Monday to Thursday, 7:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on 571-272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SK

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792